

Claims

1. A method for interworking between a number of different video communication terminals through a Video Interactive Gateway (VIG) in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that the method comprises the steps of
- the low bit-rate multimedia terminal sending an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and
 - the Video Interactive Gateway unit further sending and/or receiving messages in order to set up video communication between the terminals, and that in setting up video communication between the terminals,
 - the Video Interactive Gateway receives OLC from the packet based multimedia terminal, and
 - the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the forward channel description received from the low bit-rate multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal.
2. An interworking method according to claim 1, characterized in that the method further comprises the step of
- the Video Interactive Gateway unit sending an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

3. An interworking method according to claim 1 or to claim 2, characterized in that in setting up video communication between the terminals,
- the Video Interactive Gateway initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the low bit-rate multimedia terminal, and
 - the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal.
4. An interworking method according to any of the claims 1-3, characterized in that the Video Interactive Gateway receives OLC ack from the packet based multimedia terminal and sends OLC conf to the low bit-rate multimedia terminal when both OLC ack from the low bit-rate multimedia terminal and OLC ack from the packet based multimedia terminal has been received.
5. An interworking method according to any of the claims 1-4, characterized in that in case OLC has not been received from the packet based multimedia terminal, when OLC ack is received from the packet based multimedia terminal, the Video Interactive Gateway initiates OLC to the low bit-rate multimedia terminal by leaving forward channel description empty.
6. An interworking method according to claim 5, characterized in that in case OLC is received from the packet based multimedia terminal later, VIG closes the already opened channel to the low bit-rate multimedia terminal and opens a new one by using the proper forward channel description.
7. An interworking method according to any of the claims 1-6, characterized in that the low bit-rate multimedia

terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

8. An interworking method according to any of the claims 1-6, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

9. A method for interworking between a number of different video communication terminals through a Video Interactive Gateway (VIG) in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that the method comprises the steps of

- the low bit-rate multimedia terminal sending an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and
 - the Video Interactive Gateway unit further sending and/or receiving messages in order to set up video communication between the terminals,
- and that in setting up video communication between the terminals,
- as the Video Interactive Gateway receives OLC first from the low bit-rate multimedia terminal, it starts a timer,
 - the Video Interactive Gateway receives OLC from the packet based multimedia terminal,
 - the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the forward channel description received from the low bit-rate

- multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal, and
- the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal, initiates OLC ack towards the packet based multimedia terminal, and further initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the low bit-rate multimedia terminal.
- 10 10. An interworking method according to claim 9, characterized in that the method further comprises the step of
- the Video Interactive Gateway unit sending an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.
- 15 11. An interworking method according to claim 9 or to claim 10, characterized in that the Video Interactive Gateway sends OLC conf to H.324 when OLC ack from the packet based multimedia terminal is received.
- 20 12. An interworking method according to claim 9 or to claim 10, characterized in that in case OLC has not been received from the packet based multimedia terminal, when the timer expires, VIG initiates OLC to the low bit-rate multimedia terminal by leaving forward channel description empty.
- 25 13. An interworking method according to claim 12, characterized in that in case OLC is received from the packet based multimedia terminal later, VIG closes the already opened channel to the low bit-rate multimedia terminal and opens a new one by using the proper forward channel description.
- 30 14. An interworking method according to any of the claims 9-13, characterized in that the low bit-rate multi-
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media terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

15. An interworking method according to any of the
5 claims 9-13, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

16. A method for interworking between a number of different video communication terminals through a Video Interactive Gateway (VIG) in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that the method comprises
15 the steps of

- the low bit-rate multimedia terminal sending an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and
- the Video Interactive Gateway unit further sending and/or receiving messages in order to set up video communication between the terminals,
- 25 and that in setting up video communication between the terminals,
 - the Video Interactive Gateway receives OLC from the packet based multimedia terminal, and
 - the Video Interactive Gateway initiates OLC by using the
30 forward channel description received from the packet based multimedia terminal as forward and reverse channel description towards the low bit-rate multimedia terminal.

17. An interworking method according to claim 16, characterized in that the method further comprises the step of
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- the Video Interactive Gateway unit sending an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

- 5 18. An interworking method according to claim 16 or to claim 17, characterized in that in setting up video communication between the terminals, as the Video Interactive Gateway receives OLC first from the low bit-rate multimedia terminal, it starts a timer.
- 10 19. An interworking method according to any of the claims 16-18, characterized in that in setting up video communication between the terminals, the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal, and further initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the packet based multimedia terminal.
- 15 20. An interworking method according to any of the claims 16-19, characterized in that
- when initiating OLC by using the forward channel description received from the packet based multimedia terminal as reverse channel description towards the low bit-rate multimedia terminal, the Video Interactive Gateway takes into account the request received from the low bit-rate multimedia terminal, and that
 - when initiating OLC ack towards the packet based multimedia terminal by using the forward channel description received from the packet based multimedia terminal, the Video Interactive Gateway takes into account the request received from the low bit-rate multimedia terminal.
- 20 21. An interworking method according to any of the claims 16-20, characterized in that
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- when initiating OLC by using the forward channel description received from the packet based multimedia terminal as reverse channel description towards the low bit-rate multimedia terminal, the Video Interactive Gateway
5 takes into account the capability description received from the low bit-rate multimedia terminal, and that
- when initiating OLC ack towards the packet based multimedia terminal by using the forward channel description received from the packet based multimedia terminal, the
10 Video Interactive Gateway takes into account the capability description received from the low bit-rate multimedia terminal.

22. An interworking method according to any of the
15 claims 16-21, characterized in that the Video Interactive Gateway receives OLC ack from the packet based multimedia terminal and sends OLC conf to the low bit-rate multimedia terminal when both OLC ack from the low bit-rate multimedia terminal and OLC ack from the packet based multimedia
20 terminal has been received.

23. An interworking method according to any of the claims 16-21, characterized in that in case OLC has not been received from the packet based multimedia terminal,
25 when the timer expires, the Video Interactive Gateway initiates OLC to the packet based multimedia terminal, and as the packet based multimedia terminal acknowledges this, the Video Interactive Gateway initiates OLC to the low bit-rate multimedia terminal by leaving forward channel
30 description empty.

24. An interworking method according to claim 23, characterized in that in case OLC is received from the packet based multimedia terminal later, the Video Interactive
35 Gateway closes the already opened channel to the low bit-

rate multimedia terminal and opens a new one by using the proper forward channel description.

25. An interworking method according to any of the
5 claims 1-15, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

26. An interworking method according to any of the
10 claims 1-15, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

27. A video communication system, the video communication system comprising at least one Video Interactive
15 Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that

- the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway
20 unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description,
- the Video Interactive Gateway unit further sends and/or
25 receiving messages in order to set up video communication between the terminals,

and that in setting up video communication between the terminals,

- the Video Interactive Gateway receives OLC from the
30 packet based multimedia terminal, and
- the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the
35 forward channel description received from the low bit-rate

multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal.

28. A video communication system according to claim 27,
5 characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

29. A video communication system according to claim 27
10 or to claim 28, characterized in that in setting up video communication between the terminals,
- the Video Interactive Gateway initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the low bit-rate multi-
15 media terminal, and
- the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal.

20 30. A video communication system according to any of the claims 27-29, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

25 31. A video communication system according to any of the claims 27-29, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

30 32. A video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that
35 - the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway

unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and

- the Video Interactive Gateway unit further sends and/or receiving messages in order to set up video communication between the terminals,

and that in setting up video communication between the terminals,

- as the Video Interactive Gateway receives OLC first from the low bit-rate multimedia terminal, it starts a timer,
- the Video Interactive Gateway receives OLC from the packet based multimedia terminal,
- the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the forward channel description received from the low bit-rate multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal, and
- the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal by using the forward channel description received from the low bit-rate multimedia terminal.

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33. A video communication system according to claim 32, characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

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34. A video communication system according to claim 32 or to claim 33, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

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35. A video communication system according to claim 32 or to claim 33, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

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36. A video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that

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- the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and

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- the Video Interactive Gateway unit further sends and/or receiving messages in order to set up video communication between the terminals,

and that in setting up video communication between the terminals,

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- the Video Interactive Gateway receives OLC from the packet based multimedia terminal, and

- the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward and reverse channel description towards the low bit-rate multimedia terminal.

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37. A video communication system according to claim 36, characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

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38. A video communication system according to claim 36 or to claim 37, characterized in that in setting up video communication between the terminals, as the Video Interac-

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tive Gateway receives OLC first from the low bit-rate multimedia terminal, it starts a timer.

39. A video communication system according to any of the
5 claims 36-38, characterized in that in setting up video communication between the terminals, the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal, and further initiates OLC towards the
10 packet based multimedia terminal by using the forward channel description received from the packet based multimedia terminal.

40. A video communication system according to any of the
15 claims 36-39, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

41. A video communication system according to any of the
20 claims 36-39, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

42. A Video Interactive Gateway unit for interworking
25 between a number of different video communication terminals in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal,
30 characterized in that
- the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description,
35 tion, and

- the Video Interactive Gateway unit further sends and/or receiving messages in order to set up video communication between the terminals.

5 and that in setting up video communication between the terminals,

- the Video Interactive Gateway receives OLC from the packet based multimedia terminal, and

10 - the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the forward channel description received from the low bit-rate multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal.

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43. A Video Interactive Gateway unit according to claim 42, characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

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44. A Video Interactive Gateway unit according to claim 42 or to claim 43, characterized in that in setting up video communication between the terminals,

25 - the Video Interactive Gateway initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the low bit-rate multimedia terminal, and

30 - the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal..

45. A Video Interactive Gateway unit according to any of the claims 42-44, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the
35 packet based multimedia terminal is a H.323 terminal.

46. A Video Interactive Gateway unit according to any of the claims 42-44, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.

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47. A Video Interactive Gateway unit for interworking between a number of different video communication terminals in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that

10 - the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and

15 - the Video Interactive Gateway unit further sends and/or receiving messages in order to set up video communication between the terminals.

and that in setting up video communication between the terminals,

20 - as the Video Interactive Gateway receives OLC first from the the low bit-rate multimedia terminal, it starts a timer,

25 - the Video Interactive Gateway receives OLC from the packet based multimedia terminal,
- the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward channel description towards the low bit-rate multimedia terminal, and by using the forward channel description received from the low bit-rate multimedia terminal as the reverse channel description towards the low bit-rate multimedia terminal, and that

30 - the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack to-

wards the packet based multimedia terminal by using the forward channel description received from the the low bit-rate multimedia terminal.

- 5 48. A Video Interactive Gateway unit according to claim 47, characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.
- 10 49. A Video Interactive Gateway unit according to claim 47 or to claim 48, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.
- 15 50. A Video Interactive Gateway unit according to claim 47 or to claim 48, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.
- 20 51. A Video Interactive Gateway unit for interworking between a number of different video communication terminals in a video communication system, the video communication system comprising at least one Video Interactive Gateway unit, at least one low bit-rate multimedia terminal, and at least one packet based multimedia terminal, characterized in that
- 25 - the low bit-rate multimedia terminal sends an Open Logical Channel (OLC) message to the Video Interactive Gateway unit, the Open Logical Channel (OLC) message including a forward channel description and a Reverse channel description, and
- 30 - the Video Interactive Gateway unit further sends and/or receiving messages in order to set up video communication between the terminals.
- 35 and that in setting up video communication between the terminals,

- the Video Interactive Gateway receives OLC from the packet based multimedia terminal, and
- the Video Interactive Gateway initiates OLC by using the forward channel description received from the packet based multimedia terminal as forward and reverse channel description towards the low bit-rate multimedia terminal.

52. A Video Interactive Gateway unit according to claim 51, characterized in that the Video Interactive Gateway unit sends an Open Logical Channel (OLC) rejection message to the low bit-rate multimedia terminal.

53. A Video Interactive Gateway unit according to claim 51 or to claim 52, characterized in that in setting up video communication between the terminals, as the Video Interactive Gateway receives OLC first from the low bit-rate multimedia terminal, it starts a timer.

54. A Video Interactive Gateway unit according to any of the claims 51-53, characterized in that in setting up video communication between the terminals, the Video Interactive Gateway receives OLC ack from the low bit-rate multimedia terminal and initiates OLC ack towards the packet based multimedia terminal, and further initiates OLC towards the packet based multimedia terminal by using the forward channel description received from the packet based multimedia terminal.

55. A Video Interactive Gateway unit according to any of the claims 51-54, characterized in that the low bit-rate multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a H.323 terminal.

56. A Video Interactive Gateway unit according to any of the claims 51-54, characterized in that the low bit-rate

multimedia terminal is a H.324 terminal and that the packet based multimedia terminal is a SIP terminal.